

**IN THE CLAIMS**

Claims 1-12 are cancelled.

13. (New) Generation and application method on a support of a digital spatial marking of  $X \times Y$  points according to a resolution of  $d1 \times d1$  points per surface unit and intended to be read by a reading device with a resolution of  $d2x$  by  $d2y$  points per surface unit, taking into account that the ratio  $d1x/d2x$  and/or  $d1y/d2y$  is larger than 1, this process comprising the following steps:

- sub-sampling of the digital spatial marking in X according to a factor  $n_x = d1x/d2x$  and in Y according to a factor  $n_y = d1y/d2y$ ,
- erosion of the points intended to be applied so as to leave one point every  $n_x$  points in X and one point every  $n_y$  points in Y,
- application of the spatial marking on the support.

14. (New) Generation and application method of a spatial marking according to claim 13, wherein the resolution of the reading device is identical in X and in Y that is to say  $d2x = d2y$ .

15. (New) Generation and of application method of a spatial marking according to claim 13, wherein the resolution of the initial spatial marking is identical in X and in Y that is to say  $d1x = d1y$ .

16. (New) Generation and application method of a spatial marking according to claim 13, wherein the ratio of resolution in X ( $n_x$ ) and the ratio of resolution in Y ( $n_y$ ) is comprised between 2 and 5, 2 and 5 inclusive.

17. (New) Generation and application method of a spatial marking according to claim 13, wherein the support is constituted by a printing process.

18. (New) Generation and application method of a spatial marking according to claim

13, wherein the support is constituted by an engraving process.

19. (New) Method of recognition of a spatial marking applied according to the generation method of claim 13, wherein it includes the following steps:

- digital acquisition of an image of the support,
- filtering on the image obtained to eliminate the parts not comprising the spatial marking,
- use of autocorrelation properties to compensate every affine transformation introduced by the acquisition,
- compensation in translation of the spatial marking using an intercorrelation between the obtained spatial marking and the group of possible positions of the spatial marking defined by a key,
- decoding of the digital information by statistical correlation for each bit of information.

20. (New) Detection method of a spatial marking according to claim 19 wherein the filtering stage is based on a compensation of a uniform initial colour.

21. (New) Detection method of a spatial marking according to claim 19 wherein the filtering stage is based on a prediction of the image of the initial support by a soundproofing filter.

22. (New) Detection method of a spatial marking according to claim 19, wherein the digital acquisition of the image is carried out by a scanner.

23. (New) Detection method of a spatial marking according to claim 19, wherein the digital acquisition of the image is carried out using a portable detector.

24. (New) Detection method of a spatial marking according to claim 19, wherein the acquisition and processing of the spatial marking are carried out in two geographically remote locations.